

Amendments to the Drawings:

Attached are Annotated and Replacement drawings.

REMARKS

Reconsideration and allowance of the subject application in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 12-15, 17 and 19-26 remain pending in the application. Claims 12, 20-22 have been amended.

Applicant appreciatively notes that claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant requests that this be held in abeyance pending the allowance of claim 1.

The drawings are objected to under 37 CFR 1.83(a). In response, the attached Replacement drawings show the first, second and third planes referred to in the claims and description. The lead line for reference number 13 has also been corrected. Accordingly, this objection should be withdrawn.

The disclosure stands objected to because the Examiner states that it is unclear how 5c and 5a are in one plane. In response, 5A has been removed from page 9, line 7. Accordingly, this objection should be withdrawn.

Claims 12-15, 17 and 19-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. In response, claims 12 and 20-22 have been amended. Accordingly, this rejection should be withdrawn.

Claims 12, 13, 15, 17 and 19-26 are rejected under 102(b) as being unpatentable over Garcin (5,848,911). Applicant respectfully traverses this rejection.

The connector embodying the invention is intended to be used in telecommunications applications, and in such applications two features have overriding importance in securing the commercial success of a connector: (1) the connector must be capable of terminating two wires, one above the other, in its slot; (2) the connector must be compatible with existing industry standard wire inserter tools.

Feature 1 is important for telephone applications. This particular type of connector is typically used in domestic and commercial telephone sockets. When, for example, a socket is installed in a home, the fixed (building) wiring will be connected to the idc of the present

invention. If a second socket is to be installed, the installer will “daisy-chain” this second socket to the first socket, by terminating a second wire on the idc connector of the first socket, and then connecting this wire to the second socket. Further sockets are each added by the simple procedure of adding a second wire to the previous socket’s idc, and extending the daisy chain. Until the advent of an idc connector (U.S. Patent No. 4,171,857 to Forberg) capable of sustained long term reliability with two wires connected in this manner, screw terminal connectors were the only available method.

Prior to the Forberg disclosure, the state of the art in idc connectors was typically as disclosed in U.S. Patent No. 3,798,587 to Ellis. In these designs, the contact blades are arranged at 90 degrees to the wire axis, and inserting a wire causes a shearing force on the contact, with the effect that the slot between the blades is opened in a progressive “V” shaped taper from the bottom of the contact, to the wire, and this opening “V” shape extends right up to the top (open end) of the slot. If a second wire of the same size as the first is inserted above this first wire it will not make satisfactory contact with the blades, as it will be higher up in the “V” region and, wherever it sits, the blades of the contact will have already been displaced too much by the insertion of the first wire.

Forberg and Vachhani (U.S. Patent No. 4,591,223) both realize that for a second wire to terminate satisfactorily, displacement of the contact blades must be torsional, so that there is a tendency for the section of slot above the first-inserted wire to close again behind the wire. Both Forberg and Vachhani represent a significant step forwards in insulation displacement connector art.

Hence, for a connector to satisfactorily and reliably terminate two wires in a single slot, it is essential that the force on the contact blades is torsional, not a shear force.

Feature 2 is important for the device to become a commercially acceptable design. Take, for example, British Telecom, which employs around 16,000 installers. Each installer must be equipped with a standard wire inserter tool to enable him to connect a telephone socket. Typically, such tools cost around £ 10.00/each, so if a new non-compatible design were to be adopted by BT, an initial investment of around £ 160,000 in new tools would be essential. Even after this, there would always be the risk of an installer using the wrong tool, given he would now have a choice of two in his tool kit and destroying or damaging the connector to which he intends to connect the wire. The BT standard tool is in fact that created originally for use with

the Forberg disclosure mentioned above.

It is immediately apparent that this blade which is at 90 degrees to the wire axis will be displaced by a shearing force when the wire is inserted, causing the slot to pen in the typical shallow "V" shape, and seriously compromising its ability to function with a second wire inserted into the slot.

This design also has the advantage of notching the wire conductor at points which are substantially diametrically opposite, a disadvantage already discussed in the present invention and specifically avoided by the claimed invention.

Furthermore, the Garcin device requires one blade (the angled one) to be substantially wider than the other, which displaces the slot significantly away from the center line of the connector wire guides (Fig. 5 in the patent illustrates this), rendering the design incompatible with standard inserter tools.

For reference, the attached Figure A is a view of Figure 5 of the Garcin design, but with the "standard" (Forberg) wire inserter anvils A01 and A02 superimposed to illustrate the unsuitability of this connector in use with the BT style inserter pool. It will be appreciated that the upper anvil A01 will strike the contact blade during wire insertion, therefore rendering it impossible to insert a wire in this tool. The tool will totally destroy the wire receiving slot of the contact.

Although the inserter head of the American Industry Standard (AT&T) tool is different, it still requires that the wire receiving slot be on the connector center line, and therefore it would not terminate this connector.

Accordingly, it is respectfully submitted that Garcin does not anticipate independent claims 12, 20, 21 and 22 and the anticipation rejection should be withdrawn. Dependent claims recite, add important limitations and should be patentable for the reasons discussed above with respect to the independent claims as well as on their own merits.

All objections and rejections having been addressed, it is respectfully submitted that the present application should be in condition for allowance and a Notice to that effect is earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including

extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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A handwritten signature in black ink that reads "Kenneth M. Berner". The signature is written in a cursive, flowing style.

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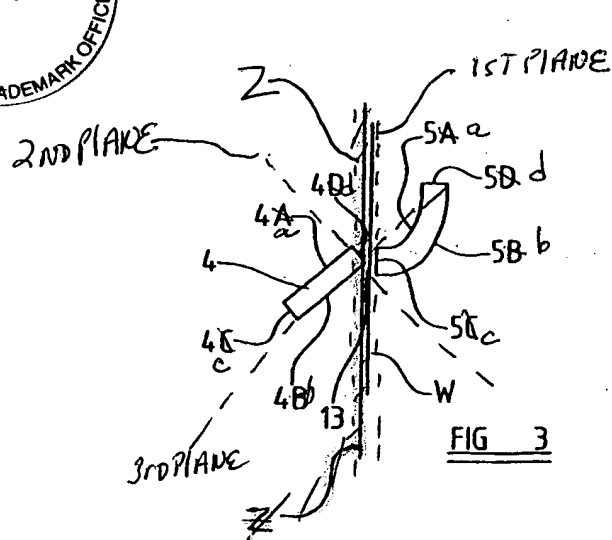


FIG 3

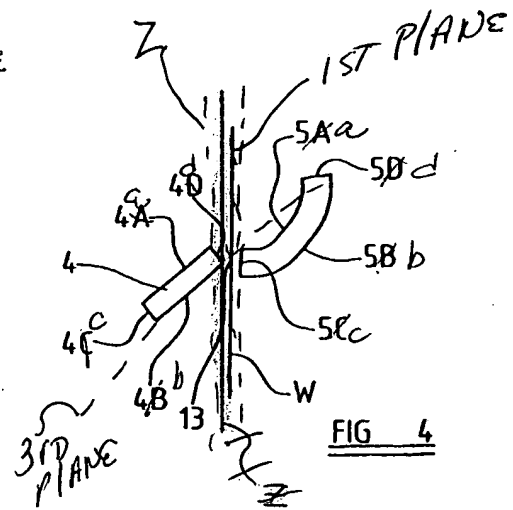


FIG 4

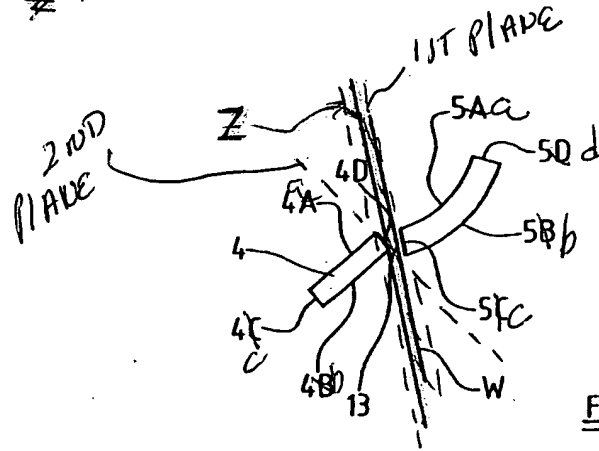


FIG 5

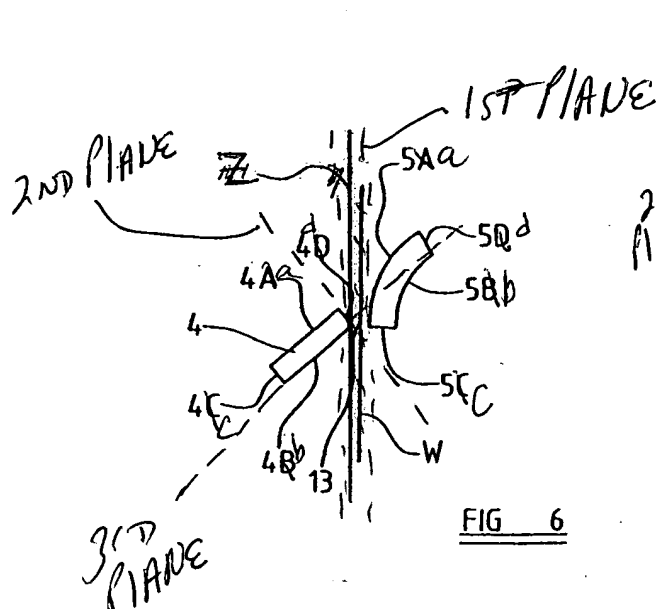


FIG 6

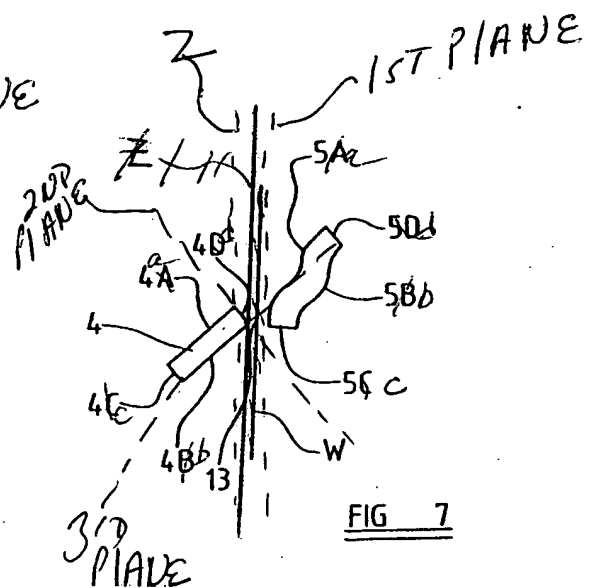


FIG 7

